



Distribution market model project: draft report

How can consumers get more value from rooftop solar, batteries and energy saving appliances?

In a draft report released today, the Australian Energy Market Commission has outlined a vision for a competitive 'distribution market' which enables consumers to get the most value out of their rooftop solar panels, batteries and other distributed energy resources as we move to a lower emissions future.

AEMC Chairman John Pierce said the draft report sets out how consumers or their service providers will be able to gain more control over how their batteries or other distributed energy resources are used, whether that's using the electricity themselves, or selling that electricity or the other services that distributed energy resources can provide.

"If, as expected, distributed energy resources continue to become smarter and cheaper, we will see an acceleration in consumer uptake. We need to put consumers in the driving seat – giving them the choice about how to optimise the value of their household's or business's energy investments," said Mr Pierce.

Distributed energy resources include a range of 'smart' technologies, such as battery storage, electric vehicles and smart household appliances like refrigerators and dishwashers, which are able to respond to short-term changes in price signals.

These resources can provide services to different parts of the electricity market. For example they can:

- help consumers reduce electricity bills
- help electricity networks manage peaks in demand
- compete in the wholesale electricity market by exporting electricity
- provide services that help make the system secure, such as frequency control.

Currently consumers might be able to benefit from one or two of these revenue streams. The draft report outlines the need for a way to buy and sell energy and related services at the distribution level in a more dynamic way, in response to price signals.

The draft report describes how an independent 'optimising' function would help consumers with distributed energy resources make decisions on the best use of these assets. The report suggests that the optimising function should be undertaken by parties other than regulated network businesses to allow the multiple value streams – from retail, network and wholesale markets – to be realised.

"Distributed energy technologies can provide benefits to consumers, networks and wholesale markets. We need a way to allow consumers and their retail energy service providers to determine where they can get the most value at any point in time," said Mr Pierce.

"As an example, for consumers this means that if you want to use the electricity from your solar panels or your battery storage, you can, and if you don't need to use that electricity at a particular time, you can sell it to whoever values it the most."

To underpin a competitive distribution market, the draft report also identifies a number of key market and technical arrangements that may be needed in the future.

In particular, cost-reflective network tariffs, which are due to roll out later this year, are essential to providing consumers with more accurate price signals on investing in, and using, distributed energy resources, and are an important enabler for dynamic optimisation.

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Other changes that may be required to support a future distribution market include:

- investment in smart IT and communication infrastructure so network businesses can better assess the technical impacts of distributed energy resources on their networks, and other market participants can make better decisions on how to invest in, and operate, distributed energy resources
- consideration of an appropriate access model for distributed energy resources to use the network, if networks become congested as more resources connect
- more transparent and standardised technical assessments for connecting distributed energy resources, to avoid onerous requirements which can increase costs, or loose requirements which can create technical issues
- evolving Australian standards for distributed energy resources so they remain fit-for-purpose.

Purpose of the report

This project is part of the AEMC’s technology work program. The report will be used to help inform the AEMC’s analysis of rule changes submitted by stakeholders in response to emerging issues, and our advice to governments.

The report builds on the analysis undertaken by other projects in the technology work program, including the [Integration of Storage](#) report.

Submissions

Submissions on any aspect of the draft report are open until 4 July 2017. The final report is due to be published in August 2017.

Audiocast

An audiocast presentation of the draft report is available on the [AEMC’s website](#).

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